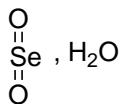


Selenious Acid

Selenium Dioxide monohydrate



H₂SeO₃

Mol. Wt. 129.0

Selenious Acid contains not less than 93.0 per cent and not more than 101.0 per cent of H₂SeO₃.

Category. Oxidizing agent

Description. A white crystalline powder.

Identification

A. Dissolve 50 mg of substances under examination in 5 ml of *water*, add 100 mg of *sodium bicarbonate* and mix, Gas bubbles develop.

B. Dissolve 50 mg of substances under examination in 5 ml of *0.1 M hydrochloride acid*, add 50 mg of *stannous chloride*. A curdy tan-orange precipitate is formed.

Tests

Insoluble matter. Dissolve 1 g in 5 ml of *water*; it dissolves completely and the solution is clear.

Selenate and sulphate. Dissolve 0.5 g in 10 ml of *water*. Add 0.1 ml of *hydrochloride acid*, 1 ml of *barium chloride*, and mix. No turbidity or precipitate is formed in 10 minutes.

Sulphated ash (2.3.18). Not more than 0.01 per cent, determined on 10.0 g.

Assay. Dissolve 100 mg of substance under examination in 50 ml of *water* in a suitable glass-stopper flask. Add 10 ml of 30 per cent w/v solution of *potassium iodide* and 5 ml of *hydrochloric acid*, and mix. Insert the stopper in the flask, and allow to stand for 10 minutes. Add 50 ml of *water* and 3 ml of *starch solution*. Titrate with *0.1 M sodium thiosulphate* until the solution is colorless, and then titrate with *0.05 M iodine* to a blue endpoint. Subtract the volume of *0.05 M iodine* from the volume of *0.1 M sodium thiosulphate* to obtain the volume of *0.1 M sodium thiosulphate* equivalent to selenious acid.

1 ml of *0.1 M sodium thiosulphate* is equivalent to 0.003225 g of H₂SeO₃.

Storage. Store protected from moisture.